RFI 11-B ---Strategic National Stockpile (SNS) System Requirements Summary

The ISDH is looking at purchasing an Inventory Control system to support the Indiana SNS plan. We are working on detailed requirements, which will be included as part of the RFP. Below is a summary of the requirements.

General requirements

Key components of the Indiana SNS plan are a distribution center (RSS or Receive, Store and Stage), PODs (Point of Dispensing sites), hospitals and other locations to receive shipments. The system must manage inventory and operations in the RSS. While the primary use of the SNS system is to manage medication and medical supplies, the reality is that by defining the elements in the "item" table, it can be used manage any type of inventory:

IT requirements

The application must be Web-based but have the capability to operate standalone in the event an Internet connection was not available. Database schemas and a data dictionary should be available. If the vendor cannot support the functionality, an API should be available.

Functional Requirements

This section defines the key activities the system must support.

Receiving

These functions support receiving any type of shipment coming into the RSS. There are three types of receivings:

1. CDC shipments with a pipe delimited file containing information on the inbound shipment. The pipe file may be received in advance or with the shipment. There are two types of CDC shipments:
   - 12 hour push pack will almost always contain the pipe delimited file.
   - Managed inventory which may contain a pipe delimited file but probably will not.

   The pipe delimited file needs to feed directly into the receiving file.
2. Receiving against an open purchase order. We will create an order for special items not normally maintained through the SNS system. These orders will probably come through from the CDC but could come directly from a vendor or supplier. We need the ability to override the quantities on the open order. We also need an option to close the order or keep it open pending additional receipts.
3. Receivings from the CDC or outside vendor with no open purchase order on file. The RSS staff will need to approve receiving the shipment.

Receiving is a two part process. The first part involves unloading the bulk shipment and comparing it to the carrier freight bill or shipping manifest. It usually involves receiving containers or pallets. If there is an open purchase order, the order is pulled for receipt. Any visible damage or overs / shorts are identified. The second part is identifying at a detailed level what was received. This identifies quantities by specific item and all its attributes (packing factor, lot, etc.). Any item flagged as "track by lot" must be received and tracked by lot number. If this is a receipt against an open purchase order, the detailed receiving is matched against the open order. If there is a variance, the RSS staff has the ability to override purchase order quantities. The RSS staff also needs to make the decision to close the purchase order. If this is a

receipt with no open purchase order, the RSS staff will make the decision to accept it or not. Any concealed damages or overs/shorts are identified in this step.

Allocation

The goal of allocation is to determine the distribution of medication, PPE, or other items to be shipped to a destination location (POD, hospital, etc.). We need the capability to allocate based upon a specific receiving or against on-hand inventory. We also need to be able to do a pre-allocation based on projections for what we will receive.

There are three types of allocation methods:

1. Population – the allocation is based upon the population serviced by the location. Using the packing factor for each item, we can determine how many people can be serviced by a carton of medication or item and then allocate the number of cartons to the location.
2. Template based - We will establish a model of a list of medications and items that would reflect a certain population base. We will use this template to allocate to each destination that is flagged to receive a shipment.
3. Medication / item order pull – this method is based upon establishing a matrix of medications and locations. The top rows will show total received, total to be allocated, total allocated and remaining quantity not allocated. For each location we will enter the quantity to be shipped. This allocation method will also serve as the core of a reorder function.

The final result of allocation is to identify at a detail level what we will ship to the destination location. There are a number of parameters (e.g. percent of receipt to ship) and rules (e.g. cannot over allocate) that go into the allocation.

Picking

Once an allocation has been finalized, we are ready to print pick slips. For pre-allocations, there may be a preliminary review / adjust step to account for receiving variances. Priorities may be assigned to the sequence in which we print pick slips. Allocation is done by item; however, the pick slip function must break the allocation down by lot and warehouse location / container.

The pick slips will print destination information, warehouse location and all the detailed information required to pick the items. In addition to the picks slips, a control sheet containing general picking information and destination labels will print. When released, pick slips will print in priority sequence. We need the ability to project the number of pallets in a shipment going to a specific destination.

Quality Assurance (QA)

QA is the final check on the pick. QA may be done as an integral part of the picking process or as separately from the picking process. QA is responsible for insuring the shipment is complete prior to shrink wrapping it and moving to outbound staging. There is a QA entry that flags the pick as ready to ship. It also has the option to enter any adjustments to the pick slip.

Shipping

Shipping covers three major functions:

1. Prepare paperwork - Once QA flags the pick is complete, the next step is to prepare the Bill of Lading (BOL) shipping document. The destination location and contact information print on the top of the BOL. The detailed medication / item information print in the body. If the transport information (security escort and truck driver) is known, it is printed. The BOLs may be printed one at a time or in batch by priority.
2. Shipping - When the truck and any shipment security arrive, the driver / truck and security information are written on the BOL. In Indiana INDOT (Indiana Department of Transportation) provides the trucks and the ISP (Indiana State Police) provide in route security. A shipment entry and in route status update entries are made. The notice of shipment and status updates feed external (e.g. WebEOC) processes. The shipment entry also transfers inventory to the destination.
3. Delivery – There is an acknowledgment of receipt entry at the destination site. This entry also captures any damaged or missing items. It can be made through a Web based function or called into the RSS. This entry flags the shipment as complete.

Controlled Substances

Items in the system may be flagged as controlled substances. Controlled substances represent an exception to the normal process. They are received against a DEA form and are stored in a secured area. Controlled substances listed on a pick slip are not picked. They will be picked as part of the shipment process and hand delivered with a DEA form to the security person accompanying the shipment.

POD / Hospital functions

These requirements support destination activities.

Reorders

Reorders are requests from PODs, hospitals and other destination sites for additional medication or medical supplies. The POD or hospital coordinator must approve all requests. The request is entered using the same base function describe in allocation for the medication / item order pull. If the request is for a special item not maintained through the system, a purchase order must be created. The same picking and shipping process used for inbound receivings is followed.

Transfers

Transfers are handled by the local POD or hospital. The POD or hospital coordinator will be notified after-the-fact by of all transfers. The hospital or POD coordinator makes a system entry to reflect the transfer.

Return to RSS

Select items may be returned to the RSS for inventory balancing, quarantine or to consolidate to return to the vendor. The process is the same as with a transfer except the requestor will be the hospital or POD coordinator and the destination will always be the RSS. The hospital or POD coordinator is responsible for all arrangements related to the return.

Miscellaneous Requirements

Perpetual Inventory Management

The system must manage inventory at the RSS site. If we should have a situation with multiple RSS sites, we must track inventory separately at each site with an aggregate inventory at all sites.

While we do not track inventory at the POD or hospital, we need to track inventory that is shipped to the POD or hospital. For accounting purposes, we need to track inventory by item. For allocation, picking and shipping, we need to track inventory by item and lot. We need to be able to track inventory at an item level reflecting all transactions against the item.

Ordering System

We need a basic ordering system to track special requests. The system will capture:

- Vendor (usually the CDC) information
- Item, cost (if known) and quantity information
- Distribution information (locations that requested the items)
- Shipping information

Cost is optional and there is no need to track open-to-buy information. We do need to track the status of open orders, especially partial shipments. We need the ability to override the order quantities when received at the RSS. The decision to close the order will be a RSS / DOC decision.

Return to Vendor (RTV)

The RTV represents the final disposition of any inventory at the RSS. The RTV can represent a return to the CDC, shipment to a medication disposal site, return to a manufacturer or vendor or any external location that represents the final disposition of the item. Once approved, we print pick slips and follow normal RSS operational procedures.

Controlled Substances

Controlled substances are flagged as such on the item table. Controlled substances are treated as an exception to normal warehouse procedures. When received we need to print a DEA form and store the items in a secured area. When shipped we need to pull form the secured area and print a DEA form.

Physical Inventory

We need to provide the ability to reconcile inventory. We will print a physical inventory report by item by lot by location. There will be a physical count and reconciliation process to verify the inventory. There needs to be a function to enter any adjustments. The physical inventory for the location is updated based upon the net adjustments.

Reports

There needs to be a standard set of reports that reflect warehouse operations and inventory control. A report generator or database schema and database dictionary should be provided. An ad hoc query / report capability is a bonus.